Skeptics scoff, privacy advocates protest as biometric IDs advance

September 21 2012, by Steve Johnson

Long envisioned as an alternative to remembering scores of computer passwords or lugging around keys to cars, homes and businesses, technology that identifies people by their faces or other physical features finally is gaining traction, to the dismay of privacy advocates.

Some consumer gadgets already are outfitted with scanners to verify the user's face or fingerprint, and many office buildings control access via retina and voice-recognition systems. But that could be just the beginning. Corporations, government agencies and university researchers are exploring ways to identify people through everything from the shape of their ears, veins and DNA to their gait, heartbeat and body odor.

"There are multiple benefits to society in using this form of identification," said Anil Jain, a Michigan State University computer science and engineering professor, adding the technologies could prove "transformative."

But skeptics call many of these "biometric" concepts infeasible. And while the idea is to bolster security, civil libertarians believe the technology could have grave privacy implications. They fear it could plunge us toward a future where we've forfeited the right to remain anonymous and our most personal information is bandied about in massive databases by retailers, police or others - often without our knowledge.

With face recognition, for example, "in 10 years the technology is going

to be so good you can identify people in public places very easily," said Joseph Atick, a face-recognition innovator and co-founder of the trade group International Biometrics & Identification Association. But misusing it could result in "a world that is worse than a big-brother state," he warned, adding, "Society is just beginning to catch up to what the consequence of this is."

Various biometric options already are being employed or investigated.

To minimize ticket fraud, visitors to Walt Disney World in Florida routinely have their fingertips measured, and San Ramon, Calif.-based 24 Hour Fitness confirms member identities with fingerprint scans. Hewlett-Packard offers a fingerprint sensor for accessing some personal computers. And in July, Apple bought AuthenTec, whose fingerprint sensors are used in phones and buildings.

Some devices - such as Samsung's Galaxy Nexus phone - also incorporate features to identify the user by his or her face, and Apple recently won a patent for such technology. Meanwhile, Intel is studying biometric alternatives to house and car keys, and described voice, face and "gesture" recognition capabilities it helped develop at a conference last week. The chipmaker also just bought Israeli-based IDesia Biometrics, whose technology enables PCs to recognize users by their heartbeats.

In a preliminary study for the U.S. Department of Homeland Security, the nonprofit MITRE research organization in April announced data showing "that human odor may serve as a unique biometric identifier." Meanwhile, the security agency has said it is developing portable DNA scanners, in part to "reduce kinship fraud" by immigrants claiming the right to join relatives in this country.

James Wayman, a San Jose State University professor who has studied

biometric concepts for decades, doubts people can be identified by their gait or odor. And though passwords can be stolen, he believes they will remain the most practical way to access computers. Nonetheless, he acknowledges that voice and face-recognition methods have improved - a change that, coupled with cyber attacks on computerized data, has fueled interest in biometric technologies to strengthen security. Global sales of biometric products are expected to jump from less than $3 billion in 2009 to about $6 billion this year and nearly $11 billion by 2017, according to Acuity Market Intelligence.

Still, fears persist that the trend could degrade personal privacy. Intel technology evangelist Vu Nguyen said the chipmaker hopes to ease that concern by letting people choose whether to use biometric devices and by limiting what is done with their information.

But with digital cameras proliferating, countless people could be photographed and identified without their knowledge, some experts warned at a July congressional hearing on face-recognition technology used by Facebook, whose users upload as many as 300 million photos daily. Moreover, they told lawmakers, by combining that information with databases being compiled from social media sites, Internet search records and other sources, detailed dossiers could be quickly compiled on people by government authorities and businesses.

A car salesman snapping your image could "infer your credit score the moment you enter the dealership and use a psychological profile (also calculated in real time from your online posts) to nudge you to accept a steep price for the car you wanted," Carnegie Mellon professor Alessandro Acquisti testified.

Similar worries were expressed in April by a European Commission study, which concluded that such technologies "could put an end to anonymity."

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INTEREST IN BIOMETRICS:

Technologies that can confirm people's identities through their physical or behavioral characteristics have caught the attention of several prominent local companies. Among them:

-Hewlett-Packard: It offers a fingerprint sensor for accessing some personal computers.

-Apple: In July, it bought AuthenTec, whose fingerprint sensors are used in phones and buildings. Apple last year also obtained a patent for face-recognition technology.

-Intel: Considering the technologies as alternatives to house and car keys, the chipmaker described voice, face and "gesture" recognition capabilities at a software conference on Tuesday. It also just bought Israeli-based IDesia Biometrics, whose technology enables PCs to recognize users by their heartbeats.

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